

ECONOMIC AND SOCIAL COUNCIL

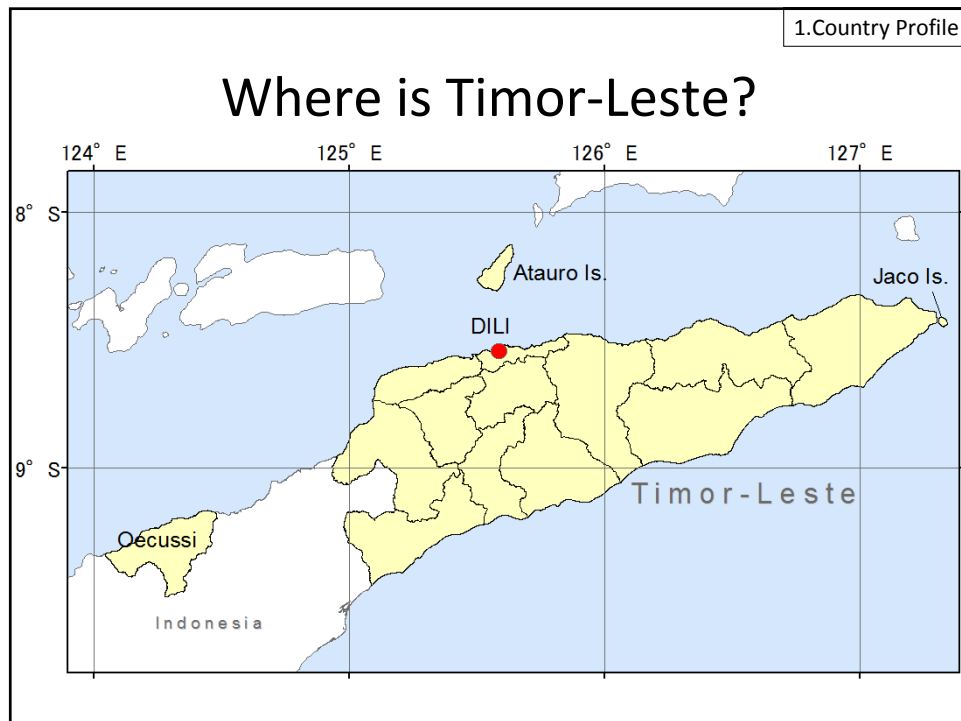
**Eighteenth United Nations Regional Cartographic
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Invited Papers**

**The Efforts of Building GIS Infrastructure in a Newly Independent
State: The case of Timor Leste^{*}**

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The efforts building GIS infrastructure in a newly independent state -The case of Timor-Leste-

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For 18th UNRCC-AP



Outline

- A Southeast Asian Country
- Size: 15,000 sq. km
- Mainly mountainous, with small plains
- Tropical monsoon climate
- Population : around one million
- Capital city: Dili
- Economy: Agriculture (Coffee, sandalwood), Offshore oil and gas
- 13 Districts, 65 Sub-districts and 442 Sucos (Villages)

History

- -1600: Small kingdoms recorded
- 1611-1975: Portuguese colonization
- 1975: Indonesian occupation and administration
- 1999: Referendum on independence
- 2002: Independence (20 May)
- 2009: Eight year from independence

GIS development Chronology

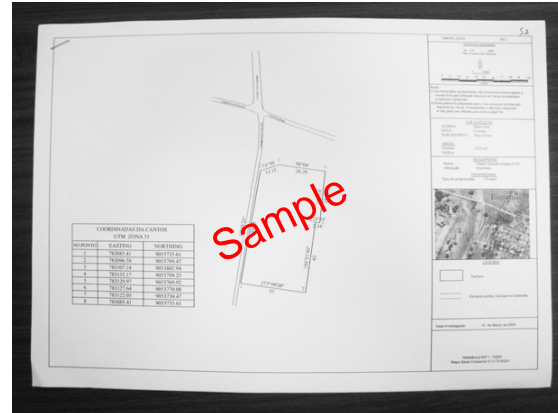
- 1990s, Second Land Resource Evaluation and Planning Project (LREP-II), ADB funded
 - First GIS application, during Indonesian period
- 2000- Various supports from UN, Int'l Organizations and bilateral donors,
 - Transitional period and independence period
- 2006: Interrupted by internal conflicts
 - Support Resolution at 17th UNRCC-AP
- 2007-: Resume of GIS development with international supports.

Policy Overview

- No comprehensive legal framework for GIS infrastructure development (e.g. NSDI law)
- Bill on land registration and cadastral system is being prepared.
- DNTPSC, Ministry of Justice is responsible for national cadastral and geographic information system.
- No official coordination body for GIS policy, but
- GIG (Geographic Information Group) is virtually the national coordination body
 - Experts from Gov., UN and Intl. Organizations etc.

DNTPSC, Ministry of Justice

- Cadastral surveys for determination of location and size of parcels for development and use.



DNTPSC, Ministry of Justice

- Maintain framework geographic dataset
 - Topographic Map
 - Aerial photograph
 - Geodetic networks
 - Distribution to users



DNTPSC, Ministry of Justice

- Contribution to National Development Strategy
 - Prime-Minister’s Office
 - Providing thematic maps for consideration
- “Ita nia rai(Our Land) ” Project
 - Establish land registration system
 - Legal and technical (cadastral) base
 - USAID supported
- Boundary Demarcation survey
 - Joint survey with Indonesian side



DNTPSC, Ministry of Justice

- External support made so far
 - Australia: Air photograph, 1:50,000 topographic map
 - Germany: Website, foreign scholarship
 - Japan: 1:2,000 topographic map for Dili, training, equipment
 - Portugal: National Geodetic framework, Geographic Information portal site
 - US: Land Registration System

Other institutions

- Ministry of Agriculture
 - ALGIS: Agricultural and Land Use GIS
 - Sustainable land management with UNDP
- Ministry of Finance / UNFPA
 - GIS support for census implementation
- Ministry of Health / WHO: Health GIS
- Ministry of Education: School GIS
- Ministry of Infrastructure: Road database
- WFP: Food security and logistics
- UNMIT (UN Integrated Mission in East Timor): GIS for UN operation

Capacity building

- Generous supports from donors and international community
 - Development of many datasets
- Yet severe lack of human and institutional capacity
 - develop, store, revise, distribute GIS data.
- Training (External and internal) still required
- Possibility of using existing resources
 - Knowledge of residing UN and International organizations can be transferred to Timor-Leste side

Towards a NSDI

- Achievements so far
 - UTM 51 S, WGS84, GI portal
- Still required for effective and efficient GIS infrastructure
 - Standardization
 - Centralizing metadata and feature catalogues
 - Facilitate data exchange and dissemination, revision of GIS portal
 - Formalized national coordination body

Administrative boundary

- No legitimated administrative boundary data
 - Various versions lead confusion
 - Potential cause of land disputes
 - Misconduct of administration works (census, election)
- Approaches for solving the problems
 - Lobbying, information sharing
 - Cooperation with Ministry of State Administration
 - Project configuration, seeking funds

Border demarcation

- Clear national border demarcation between Timor-Leste and Indonesia for
 - Maintaining security
 - Facilitate the movement of people and goods
 - Effective natural resources management
- Continuing joint efforts are
 - Resolve contested sections
 - Border marker installation, survey and maintainance
 - 1:25,000 mapping in the border area
 - Establishment of gazetteers

Conclusions

- Efforts have been made, but national capacity is still low.
- Priorities are
 - Sufficient technical capacity development
 - Overall coordination of GIS infrastructures
- Timor-Leste thanks the supports of UNRCC-AP countries and international communities